UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,982	11/19/2003	Binie V. Lipps	FWLPAT019US	6836

7590 08/23/2007

John R. Casperson
PO Box 2174
Friendswood, TX 77549

EXAMINER	
UNGAR, SUSAN NMN	
ART UNIT	PAPER NUMBER
1642	
MAIL DATE	DELIVERY MODE
08/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/716,982	LIPPS ET AL.	
	Examiner	Art Unit	
	Susan Ungar	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *01 June 2007*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The Response filed June 1, 2007 in response to the Office Action of May 2, 2007 is acknowledged and has been entered. Claims 1, 2, 4-6, 13, 15, 17-18, 20-22, have been amended. Claims 1-23 are currently being examined.

2. Applicant argues that the amendment filed February 21, 2007 is not nonresponsive and argues that the claimed invention is neither independent nor distinct from the claims originally presented. The argument has been considered and upon review and reconsideration has been found persuasive. An action on the claims as amended on February 21, 2007 and responding to the remarks/arguments filed on February 21, 2007 follows.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

New Grounds of Rejection

Claim Rejections - 35 USC 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim1-3, 11-12, 15-19, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,294,349 in view of El Deiry et al (Cell Death and Differentiation, 2001, 8:1066-1075) and Links et al (Expert Reviews in Molecular Medicine, 1999:1-21) essentially for the reasons previously set forth in the paper mailed March 8, 2007, Section 5, p. 5-8.

The claims are drawn to a process comprising bringing together a reagent containing antibodies made against a mixture of proteomic cancer markers from different cell lines with a human saliva sample to form an assay sample and determining whether an immunological reaction has occurred (claim 1), wherein the assay is an ELISA, wherein in the ELISA test, the human saliva sample is coated onto a plate prior to being brought together with the reagent (claim 2) wherein the ELISA results is titer analysis(claim 3), wherein the saliva sample is centrifuged to separate out cells and mucin and collecting the supernatant to form the sample (claim 11), wherein the sample is collected (claim 12), wherein the reagent contains antibodies against a plurality of proteomic markers (claim 15), a non invasive cancer screen comprising obtaining a saliva specimen from a patient, bringing the sample together with a reagent containing antibodies made against a plurality of proteomic markers from different types of cancer cells to form an assay sample and determining whether a reaction has occurred (claim 16), wherein the assay is an ELISA, wherein in the ELISA test, the human saliva sample is coated onto a plate prior to being brought together with the reagent (claim 17), wherein the assay tests titer (claim 18), wherein results above a predetermined value are

indicative of a positive screen (claim 19), a cancer diagnostic method comprising obtaining a saliva sample from a patient, separating the saliva sample into a plurality of portions, bringing the portions together with a plurality of reagent, a single reagent being brought together with each portion, each reagent containing a separate slate of antibodies made against proteomic cancer markers from different types of cancer cells, one type of cancer cells being used to form each slate of antibodies, conducting ELISA, associating the type of cancer cells used to produce antibodies yielding such results to provide the diagnosis, wherein the saliva sample is coated on a plate prior to being brought together with the reagents (claim 21), a method for monitoring effectiveness of cancer treatment comprising obtaining a first saliva specimen and assaying with ELISA to obtain a first test result, treating the patient and after a period of at least one week, obtaining a second saliva sample, again doing an ELISA and comparing the results of the first and second ELISA to determine effectiveness of cancer treatment (claim 22), wherein a lower titer in the second test is indicative of effective cancer treatment (claim 23).

El Diery specifically teaches that p53 is a marker that is common in a wide variety of cancer cell types including breast cancer, sarcomas, brain tumors, leukemias, colon cancer, lung cancer (p. 1067, col 1), and Links et al specifically teach that c-erb-2 is a marker commonly found in breast, ovarian and colorectal cancers, clearly teaching that these tumor antigens are markers that are common to a number of different cancers, thus these two markers are both markers from different types of cancer cells.

US Patent No. 6,294,349 teaches a method of diagnosing and monitoring malignant breast carcinomas wherein diagnosis comprises ELISA assay of c-erb-2, CA 15-3 and p53 wherein it is found that higher levels of c-erb-2 and CA 15-3 and

lower levels of p53 compared to normal controls is indicative of malignant breast carcinoma (see abstract). In particular, the specification teaches the use of salivary biomarkers to diagnose breast cancer, that is to diagnostically differentiate between women with carcinoma of breast, women with benign tumors and healthy controls (para 2 of Background of the Invention) wherein one or more biomarkers present in saliva are identified. The one or more biomarkers are provided as part of a diagnostic panel for the initial detection, follow-up screening for detection, reoccurrence of breast cancer in women, response to chemotherapy and/or surgical treatment of the disease state (para 12 of Summary of the Invention) wherein the concentration of endogenously encoded protein is used to diagnose carcinoma of the breast (para 20 of Summary of the Invention). The reference teaches that the saliva samples were taken and frozen until ready for use. The frozen saliva samples were thawed and centrifuged to precipitate cells and mucin in order to extract the bio-marker proteins. The saliva extract was then analyzed for total protein and the panel of biomarkers (para's 9 and 10 of the Detailed Description). C-erb-2 and p53 were analyzed using ELISA kits. The antibodies used in the test do not present cross-reaction with other known tumor markers and the salivary concentrations are substantially above the lower limit of detection for the assay (para 17 of the Detailed Description). It was found that the mean values for CA 15-3 among control groups was approximately 45-50% lower than the mean value for the cancer group (para 24 of the Detailed Description) On the other hand c-erb-2 was not detected in the saliva or the serum of the controls or benign lesions group and conversely the carcinoma group exhibited the presence of c-erb-2 (para 24 of the Detailed Description). Thus the mere presence of c-erb-2 in the sample is the predetermined level that is indicative of a positive screen. Examiner takes notice

that it was conventional in the art at the time the invention was made to coat ELISA plates with either sample to be tested or reagents to be used in the test prior to being brought together.

Further, a saliva test would be useful in the postoperative/post chemotherapy management of cancer patients. Following tumor removal, an expected decrease in marker concentration should follow and eventually plateau to within a normal level indicating that the patient is free of disease. In contrast, a persistently high level of salivary markers may be indicative of tumor recurrence or persistence (para 41 of the Detailed Description). One would immediately envision the elapse of at least a week after first assay before assays for the assessment of response to chemotherapy.

US Patent No. 6,294,349, El Deiry, Links et al teach as set forth above but do not specifically state that the reagent comprises the antibodies against a mixture of proteonic cancer markers in combination.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have combined the antibodies of US Patent No. 6,294,349 together into a single reagent to do a single step assay because US Patent No. 6,294,349 specifically states that the antibodies are useful for diagnosing cancer and because Patent No. 6,294,349 specifically states that the antibodies do not cross react. One would have been motivated to combine the antibodies of Patent No. 6,294,349 into a single reagent in order to save time and expense of doing multiple assays to determine the antigen composition of the saliva.

Some of Applicant's arguments set forth in response to the rejection previously set forth in the paper mailed November 16, 2006, Section 5, pages 5-8 are relevant to the instant rejection.

Applicant argues that claim 1 has been amended to require that the markers are from different cell lines. The argument has been considered but has not been found persuasive because the newly added limitation "from different cell lines" is considered a product-by process limitation. The production of a product by a particular process does not impart novelty or unobviousnes to a product when the same product is taught by the prior art. This is particularly true when the properties of the product are not changed by the process in an unexpected manner. See In re Thorpe, 227 USPQ 964 (CAFC 1985); In re Marosi, 218 USPQ 289, 292-293 (CAFC 1983); In re Brown, 173 USPQ 685 (CCPA 1972). Therefore, even if a particular process used to prepare a product is novel and unobvious over the prior art, the product per se, even when limited to the particular process, is unpatentable over the same product taught by the prior art. See In re Kind, 207 F.2d 618, 620, 43 USPQ 400, 402 (CCPA 1939); In re Merz, 97 F.2d 599, 601, 38 USPQ 143, 144-145 (CCPA 1938); In re Bergy, 563 F.2d 1031, 1035, 195 USPQ 344, 348 (CCPA 1977) *vacated* 438 U.S. 902 (1978); and United States v. Ciba-Geigy Corp., 508 F. Supp. 1157, 1171, 211 USPQ 529, 543 (DNJ 1979). Although the claims as currently constituted read on a reagent containing antibodies made against a mixture of proteonic cancer markers from different cancer cell types, the reference makes obvious a reagent containing antibodies made against a mixture of proteomic cancer markers since the prior art cancer markers include p53 and erbB2, known to be cancer markers from different cancer cell types, wherein the

markers are also drawn to specific cancer types and are used to diagnose specific cancers, for example breast cancer.

Applicant further argues that both Streckfus et al and Urban (it is noted that the information in Urban et al is also found in the combined El-Deiry and Link et al references) are directed toward specific biomarkers, and for this purpose separate assays are conducted with separate antibodies specific for the biomarker sought and do not make obvious the claimed invention which is drawn to "a reagent containing antibodies against a mixture of proteonic cancer markers. The argument has been considered but has not been found persuasive because Applicant is not addressing the issues raised in the rejection. The issue raised is that given the teachings of Streckfus it would have been *prima facie* obvious to combine the assay reagents for proteonic cancer markers, known to expressed in multiple cancer cell types, to assay for cancer in saliva in order to save time and expense of doing multiple assay to determine the antigen composition of the saliva, wherein the combined reagent would clearly contain antibodies against a mixture of proteomic cancer markers which meets the limitations of the claims.

Applicant further argues that the identity of the proteomic marker cannot be determined from the tests and the references would not lead one to conduct tests which failed to identify a particular PCM. The argument has been considered but has not been found persuasive because Applicant is arguing limitations not recited in the claims as currently constituted.

As drawn to claim 16, Applicant argues that the claims patently distinguish the combined references by the employment of a simple ELISA test given that the ELISA of Streckfus et al is a double antibody sandwich protocol. The argument has been considered but has not been found persuasive because the instant

specification does not provide a definition for a "simple" ELISA and in the absence of a teaching in the instant specification that would distinguish the ELISA of Streckfus from a "simple" ELISA, the ELISA of Streckfus is considered a simple ELISA.

Applicant further argues that the purpose of the test is different than that claimed and that utilizing a reagent containing antibodies made a plurality of markers would not be effective to do this. The argument has been considered but has not been found persuasive because once again, Applicant is arguing limitations not recited in the claims as currently constituted.

6. Claims 4-10, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,294,349 in view of in view of El Deiry et al (Cell Death and Differentiation, 2001, 8:1066-1075) and Links et al (Expert Reviews in Molecular Medicine, 1999:1-21), *Supra,* and further in view of Harlow et al (Antibodies, a Laboratory Manual, Cold Spring Harbor Laboratory Press, 1988, p. 142) and Cruse et al (illustrated Dictionary of Immunology, CRC Press, New York, page 241 , 1995) essentially for the reasons previously set forth in the paper mailed March 8, 2007, Section 6. pgs 8-10..

The claims are drawn to a process of preparing a reagent comprising at least one proteonic cancer marker comprising providing a plurality of colonies of cancer cells, extracting at least one proteonic cancer marker from each colony, forming antibodies against said cancer marker and forming the reagent from said antibodies (claim 4), wherein the colony of cancer cells are formed from a publicly available cancer cell line (claim 5), a breast cancer cell line (claim 6), wherein the antibodies are polyclonal antibodies (claim 7), wherein the polyclonal antibodies are produced in animals (claim 8), isolating serum containing said polyclonal antibodies from

blood (claim 9), forming the reagent from the serum (claim 10), extracting the proteomic cancer marker from the colony of cells by disrupting the cells, centrifuging the suspension and collecting the supernatant (claim 13), wherein the centrifuging step is done in two states that is separating out cell debris in stage 1 and separating nuclei in stage two (claim 14).

US Patent No. 6,294,349 teaches as set forth above, and further teaches that ELISA kit for assay of c-erbB-2 was purchased from Oncogene Research Company. US Patent No. 6,294,349 teaches as set forth above but does not teach the isolation and production of the antibody to c-erbB-2 used in the saliva diagnostic assay. Further, it is noted that the product sheet for the kit specifically states that the antibodies used in the assay are monoclonal antibodies to the extracellular domain of c-erbB-2 (see Appendix 1).

El Diery and Links et al teach as set forth above.

Harlow et al teach that monoclonal antibodies are often more time-consuming and costly to prepare than polyclonal antibodies and they are not necessarily the best choice for certain immunochemical techniques. (p. 142).

Cruse et al teach that polyclonal antibodies bind to many different epitopes of an antigen (p. 241).

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to prepare polyclonal antibodies to c-erbB-2 using the conventional methods claimed and to substitute those polyclonal antibodies for the monoclonal antibodies against c-erbB-2 of the Oncogene Research Elisa kit because Harlow specifically teaches that monoclonal antibodies are costly to prepare, and thus clearly costly to buy and because Harlow et al specifically teach that they are not necessarily the best choice for certain immunochemical

techniques. In particular, since the antibodies of the Oncogene Research Elisa kit are specifically monoclonal antibodies against the extracellular domain of c-erbB-2, one would have been motivated to produce polyclonal antibodies because they are useful for detecting many epitopes, rather than a single epitope of the entire protein, thus many antibodies would bind to the same molecule, producing a strong signal that is easily interpreted. One would have a reasonable expectation of success in producing said antibodies given the well known and conventional nature of polyclonal antibody production. Further, one would be motivated to use, for example, any breast cancer cell line known to express c-erbB-2 as a source material for the colony of cells that are processed to isolate the antigen because cell lines are publicly available for purchase, easy to grow and would provide a ready supply of antigen for production of antibodies.

Some of Applicant's arguments set forth in response to the rejection previously set forth in the paper mailed November 16, 2006, Section 6, pages 8-10 are relevant to the instant rejection.

Applicant argues that the disclosures of Harlow et al and Cruse et al fail to remedy the disclosures of the primary references and that claims 4-10 and 13-14 distinguish the combined disclosures of the references on the same basis as previously pointed out concerning Streckfus and Urban.

The arguments were considered and above and not found persuasive for the reasons set forth above.

Applicant states that Harlow and Cruse fail to make obvious using mixtures of antibodies formed as set forth in claim 4 to conduct the assay.

The argument has been considered but has not been found persuasive because the newly added limitation of "providing a plurality of colonies of cancer

cells, each colony being a different cancer cell line" is considered a product-by process limitation. The production of a product by a particular process does not impart novelty or unobviousness to a product when the same product is taught by the prior art. This is particularly true when the properties of the product are not changed by the process in an unexpected manner. See In re Thorpe, 227 USPQ 964 (CAFC 1985); In re Marosi, 218 USPQ 289, 292-293 (CAFC 1983); In re Brown, 173 USPQ 685 (CCPA 1972). Therefore, even if a particular process used to prepare a product is novel and unobvious over the prior art, the product per se, even when limited to the particular process, is unpatentable over the same product taught by the prior art. See In re Kind, 207 F.2d 618, 620, 43 USPQ 400, 402 (CCPA 1939); In re Merz, 97 F.2d 599, 601, 38 USPQ 143, 144-145 (CCPA 1938); In re Bergy, 563 F.2d 1031, 1035, 195 USPQ 344, 348 (CCPA 1977) *vacated* 438 U.S. 902 (1978); and United States v. Ciba-Geigy Corp., 508 F. Supp. 1157, 1171, 211 USPQ 529, 543 (DNJ 1979). The claims as currently constituted read on a reagent containing antibodies made against a mixture of proteonic cancer markers from different cancer cell types, the reference makes obvious a reagent containing antibodies made against a mixture of proteomic cancer markers since the prior art cancer markers include p53 and erbB2, known to be cancer markers from different cancer cell types.

7. Claims 1, 2, 3, 17, 18, 19, 22-23 are rejected under 35 USC 103 as being unpatentable over US Patent No. 6,294,349 in view of El Diery and Links et al, *Supra,* essentially for the reasons previously set forth in the paper mailed November 16, 2006, Section 5, pages 5-8 and further in view of US Patent No. 504,7508 or US Patent No. 4690905.

The claims are drawn to a process comprising bringing together a reagent containing antibodies made against a mixture of proteomic cancer markers from different cell lines with a human saliva sample to form an assay sample and determining whether an immunological reaction has occurred (claim 1), wherein the assay is an ELISA, wherein the human saliva sample is coated on a plate prior to being brought together with the reagent (claim 2) wherein the ELISA results is titer analysis (claim 3), wherein the assay is an ELISA, wherein the human saliva sample is coated on a plate prior to being brought together with the reagent (claim 17), wherein the assay tests titer (claim 18), wherein results above a predetermined value are indicative of a positive screen (claim 19), a method for monitoring effectiveness of cancer treatment comprising obtaining a first saliva specimen and assaying with ELISA, wherein the human saliva sample is coated on a plate prior to being brought together with the reagent to obtain a first test result, treating the patient and after a period of at least one week, obtaining a second saliva sample, again doing an ELISA, wherein the human saliva sample is coated on a plate prior to being brought together with the reagent and comparing the results of the first and second ELISA to determine effectiveness of cancer treatment (claim 22), wherein a lower titer in the second test is indicative of effective cancer treatment (claim 23).

US Patent No. 6,294,349 in view of El Diery and Links et al teach as set forth previously but do not teach the limitation of the saliva sample being coated on a plate prior to being brought together with the reagent.

US Patent No. 5,047,508 specifically teaches conventional ELISA assays wherein samples are coated onto microtiter plate prior to being brought together with the reagent (see Detailed Description Text, paragraph 7).

US Patent No. 4,690,905 specifically teaches conventional ELISA assays wherein samples are coated onto solid phase prior to being brought together with the reagent (see Text, paragraph 30).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have coated the sample onto a plate prior to being brought together with the reagent because sample coating to solid phase/plate was conventional in the art at the time the invention was made. Given the conventional nature of the step, one would have had a reasonable expectation of successfully coating the sample onto a plate prior to bringing the sample together with the reagent.

It is noted that some of Applicant's arguments drawn to the previous rejection of claims 22-23, 17-19 under 35 USC 103 in the paper mailed November 16, 2006, Section 5, pages 5-8 are relevant to the instant rejection.

Applicant argues that the claims patently distinguish the combined references by the employment of a simple ELISA test given that the ELISA of Streckfus et al is a double antibody sandwich protocol. The argument has been considered but has not been found persuasive because the instant specification does not provide a definition for a "simple" ELISA and in the absence of a teaching in the instant specification that would distinguish the ELISA of Streckfus from a "simple" ELISA, the ELISA of Streckfus is considered a simple ELISA.

Applicant further argues that Urban looks for markers in serum rather than saliva. The argument has been considered but has not been found persuasive because Urban was cited only to demonstrate that the art recognized that p53 and Erbb2 are markers common to multiple tumor cell types. Streckfus clearly provides the data and motivation drawn to the saliva limitation.

As drawn to claims 17-19, Applicant again argues that the claims patently distinguish the combined references by the employment of a simple ELISA test given that the ELISA of Streckfus et al is a double antibody sandwich protocol. The argument has been considered but has not been found persuasive because the instant specification does not provide a definition for a "simple" ELISA and in the absence of a teaching in the instant specification that would distinguish the ELISA of Streckfus from a "simple" ELISA, the ELISA of Streckfus is considered a simple ELISA.

Applicant further argues that the purpose of the test is different than that claimed and that utilizing a reagent containing antibodies made a plurality of markers would not be effective to do this. The argument has been considered but has not been found persuasive because once again, Applicant is arguing limitations not recited in the claims as currently constituted.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 4-10, 13-14 are rejected under 35 USC 112, first paragraph, as the specification does not contain a written description of the claimed invention. The limitation of providing a plurality of colonies of cancer cells, each colony being a different cancer cell line has no clear support in the specification and the claims as originally filed. Applicant argues that the newly added limitation is fairly supported at page 7, lines 34-36. The argument has been considered but has not

been found persuasive because a review of page 7, lines 34-36 reveals support for "A mixture of all four cell lines was also made in this manner. Proteonic cancer markers from each cell type and the mixture were separated by differential centrifugation to remove the cell debris and nuclei." The suggested support has been considered but has not been found persuasive because it is clear that the citation of cell lines are not drawn to the broad "plurality of cell lines" claimed, but rather is drawn only to the four cell lines specifically disclosed in the specification at lines 16-21 of page 7, that is the cell lines HT-29, Diji, CCL-13 and Sk-ov-3. The subject matter claimed in claims 4-10, 13-14 broadens the scope of the invention as originally disclosed in the specification.

10. Claims 18-20 are rejected under 35 USC 112, first paragraph, as the specification does not contain a written description of the claimed invention. The limitation of providing at least two cell lines" has no clear support in the specification and the claims as originally filed. Applicant argues that support for the Markush group is found at page 5, lines 9-13. The argument has been considered but has not been found persuasive because a review of the specification as originally filed does not reveal a single reference to the newly added limitation and the recitation of the Markush group in the specification does not remedy the new matter problem. The subject matter claimed in claims18-20 broadens the scope of the invention as originally disclosed in the specification.

11. No claims allowed.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Ungar, PhD whose telephone number is (571) 272-0837. The examiner can normally be reached on Monday through Friday from 7:30am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shanon Foley, can be reached at 571-272-0898. The fax phone number for this Art Unit is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Susan Ungar
Primary Patent Examiner
August 21, 2007